

Silicon Carbide (SiC) MOSFET - 80 mohm, 1200 V, M1, TO-247-3L

NVHL080N120SC1A

Features

- Typ. $R_{DS(on)} = 80 \text{ m}\Omega$
- Ultra Low Gate Charge (typ. $Q_{G(tot)} = 56 \text{ nC}$)
- Low Effective Output Capacitance (typ. C_{oss} = 80 pF)
- 100% UIL Tested
- AEC-Q101 Qualified and PPAP Capable
- This Device is Halide Free and RoHS Compliant with exemption 7a, Pb–Free 2LI (on second level interconnection)

Typical Applications

- Automotive On Board Charger
- Automotive DC-DC converter for EV/HEV

MAXIMUM RATINGS (T_J = 25°C unless otherwise noted)

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Parameter			Symbol	Value	Unit
Drain-to-Source Voltage			V_{DSS}	1200	V
Gate-to-Source Voltage			V_{GS}	-15/+25	V
Recommended Operation Values of Gate-to-Source Voltage	T _C < 175°C		V_{GSop}	-5/+20	٧
Continuous Drain Current $R_{\theta JC}$	Steady State	T _C = 25°C	I _D	31	Α
Power Dissipation $R_{\theta JC}$			P_{D}	178	W
Continuous Drain Current $R_{\theta JC}$	Steady State	T _C = 100°C	I _D	22	Α
Power Dissipation $R_{\theta JC}$			P_{D}	89	W
Pulsed Drain Current (Note 2)	T _A = 25°C		I _{DM}	132	Α
Single Pulse Surge Drain Current Capability	T_A = 25°C, t_p = 10 μ s, R_G = 4.7 Ω		I _{DSC}	132	Α
Operating Junction and Storage Temperature Range		T _J , T _{stg}	-55 to +175	°C	
Source Current (Body Diode)		I _S	18	Α	

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TYPICAL CHARACTERISTICS ($T_J = 25^{\circ}\text{C}$ UNLESS OTHERWISE NOTED) (CONTINUED)

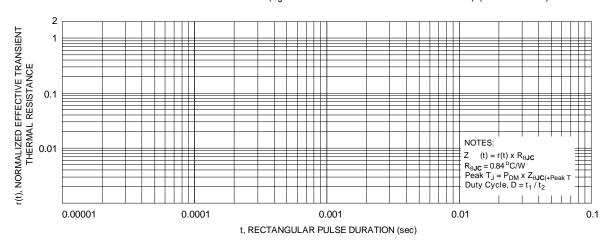


Figure 13. Junction-to-Case Transient Thermal Response Curve

